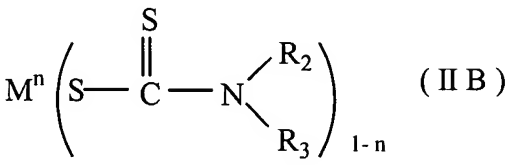
Amendments to the Claims:

1. (Original) A method of treating cancer in human cells and for sensitizing tumors to conventional cancer chemotherapy by blocking the P-glycoprotein membrane toxin extrusion pump and for sensitizing AIDS patients to anti-retroviral therapy by blocking the P-glycoprotein membrane toxin extrusion pump comprising administering a therapeutically effective amount of a dithiocarbamate thiolate anion of the formula:



(II B)

wherein R_2 and R_3 are the same or different and represent hydrogen, and unsubstituted or substituted alkyl, akenyl, aryl, alkoxy, and heteroaryl groups; M is an alkali metal selected from the group consisting of from the group consisting of sodium, potassium, calcium, magnesium, barium, and lithium; and n is the valence of the alkali metal.

2. (Original) The method according to Claim 1 wherein said dithiocarbamate thiolate is in the form of a pharmaceutically acceptable salt.

3. (Original) The method according to Claim 1 wherein said dithiocarbamate thiolate is administered in a dosage of between about 125 to about 1000 mg per day of body weight.

4. (Original) The method according to Claim 1 wherein said dithiocarbamate thiolate is administered in a dosage of between about 250 to about 500 mg per day.

5. (Original) The method according to Claim 1 wherein said dithiocarbamate thiolate is administered parenterally.

6. (Original) The method according to Claim 1 wherein said dithiocarbamate thiolate is administered orally.

7. (Original) The method according to Claim 1 wherein said dithiocarbamate thiolate is administered in combination with a metal complex that includes a metal selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc, and an ion selected from the group consisting of sodium, potassium, calcium, magnesium, barium, or lithium or an anion of small molecular weight.

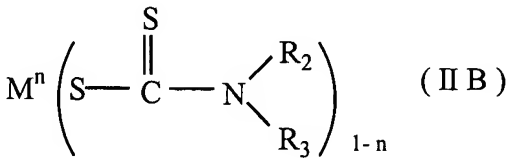
8. (Original) The method according to Claim 1 wherein said dithiocarbamate thiolate is administered in combination with a metal chelate that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

9. (Original) The method according to Claim 7 wherein said metal complex is administered separately as a chelate with an organic anion.

10. (Original) The method according to Claim 1 wherein said ion is an organic anion selected from the group consisting of citrate, acetate, glyconate, glycinate, propionate and lactate.

11. (Original) The method according to Claim 1 wherein said dithiocarbamate thiolate is administered in combination with a metal chelate that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc, and an ion selected from the group consisting of sodium, potassium, calcium, magnesium, barium, and lithium or an anion of small molecular weight.

12. (Original) A method of reducing hypoxic or ischemic damage to the cardiovascular system of a human comprising administering a therapeutically effective amount of a dithiocarbamate thiolate anion of the formula:



(II B)

wherein R_2 and R_3 are the same or different and represent hydrogen, and unsubstituted or substituted alkyl, akenyl, aryl, alkoxy, and heteroaryl groups; M is an alkali metal selected from the group consisting of from the group consisting of sodium, potassium, calcium, magnesium, barium, and lithium; and n is the valence of the alkali metal.

13. (Original) The method according to Claim 12 wherein said dithiocarbamate thiolate anion is in the form of a pharmaceutically acceptable salt.

14. (Original) The method according to Claim 12 wherein said dithiocarbamate is administered in a dosage of between about 125 to about 1000 mg per day of body weight.

15. (Original) The method according to Claim 12 wherein said dithiocarbamate is administered in a dosage of between about 250 to about 500 mg per day for disulfiram.

16. (Original) The method according to Claim 12 wherein said dithiocarbamate is administered parenterally.

17. (Original) The method according to Claim 12 wherein said dithiocarbamate is administered orally.

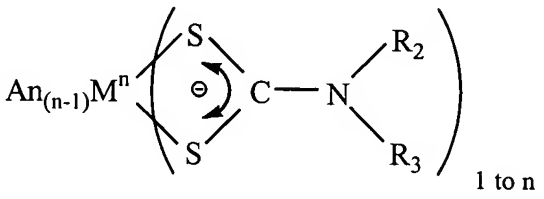
18. (Original) The method according to Claim 12 wherein said dithiocarbamate is administered in combination with a metal complex that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

19. (Original) The method according to Claim 12 wherein said metal complex is administered separately as a chelate with an organic anion.

20. (Original) The method according to Claim 12 wherein said an organic anion is selected from the group consisting of citrate, acetate, glyconate, glycinate, propionate and lactate.

21. (Original) The method according to Claim 12 wherein said dithiocarbamate is administered in combination with a metal chelate that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

22. (Original) A method of reducing hypoxic or ischemic damage to the cardiovascular system of a human comprising administering a therapeutically effective amount of a dithiocarbamate thiolate anion of the formula:



wherein R_2 and R_3 are the same or different and represent hydrogen, and unsubstituted or substituted alkyl, akenyl, aryl, alkoxy, and heteroaryl groups; M is an alkali metal selected from the group consisting of sodium, potassium, calcium, magnesium, barium, and lithium; An is a

metal selected from the group consisting of titanium, vanadium, chromium, iron, cobalt, nickel, copper, silver, silver, and gold; n is the valence of the metal.

23. (Original) The method according to Claim 22 wherein said dithiocarbamate thiolate anion is in the form of a pharmaceutically acceptable salt.

24. (Original) The method according to Claim 22 wherein said dithiocarbamate is administered in a dosage of between about 125 to about 1000 mg per day of body weight.

25. (Original) The method according to Claim 22 wherein said dithiocarbamate is administered in a dosage of between about 250 to about 500 mg per day for disulfiram.

26. (Original) The method according to Claim 22 wherein said dithiocarbamate is administered parenterally.

27. (Original) The method according to Claim 22 wherein said dithiocarbamate is administered orally.

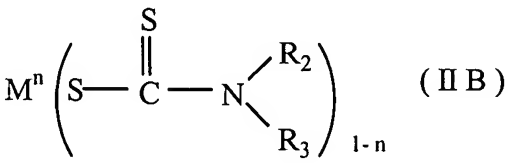
28. (Original) The method according to Claim 22 wherein said dithiocarbamate is administered in combination with a metal complex that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

29. (Original) The method according to Claim 22 wherein said metal complex is administered separately as a chelate with an organic anion.

30. (Original) The method according to Claim 22 wherein said an organic anion is selected from the group consisting of citrate, acetate, glyconate, glycinate, propionate and lactate.

31. (Original) The method according to Claim 22 wherein said dithiocarbamate is administered in combination with a metal chelate that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

32. (Original) A method for treating asthma or arthritis in humans comprising administering a therapeutically effective amount of a dithiocarbamate thiolate anion of the formula:



(II B)

wherein R_2 and R_3 are the same or different and represent hydrogen, and unsubstituted or substituted alkyl, akenyl, aryl, alkoxy, and heteroaryl groups; M is an alkali metal selected from the group consisting of from the group consisting of sodium, potassium, calcium, magnesium, barium, and lithium; and n is the valence of the alkali metal.

33. (Original) The method according to Claim 32 wherein said dithiocarbamate thiolate anion is in the form of a pharmaceutically acceptable salt.

34. (Original) The method according to Claim 32 wherein said dithiocarbamate is administered in a dosage of between about 125 to about 1000 mg per day of body weight.

35. (Original) The method according to Claim 32 wherein said dithiocarbamate is administered in a dosage of between about 250 to about 500 mg per day for disulfiram.

36. (Original) The method according to Claim 32 wherein said dithiocarbamate is administered parenterally.

37. (Original) The method according to Claim 32 wherein said dithiocarbamate is administered orally.

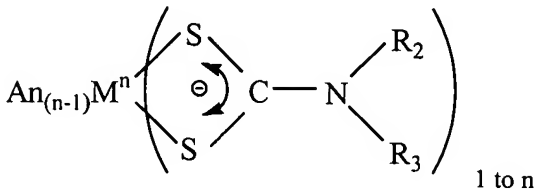
38. (Original) The method according to Claim 32 wherein said dithiocarbamate is administered in combination with a metal complex that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

39. (Original) The method according to Claim 32 wherein said metal complex is administered separately as a chelate with an organic anion.

40. (Original) The method according to Claim 32 wherein said an organic anion is selected from the group consisting of citrate, acetate, glyconate, glycinate, propionate and lactate.

41. (Original) The method according to Claim 32 wherein said dithiocarbamate is administered in combination with a metal chelate that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

42. (Original) A method for treating asthma or arthritis in humans comprising administering a therapeutically effective amount of a dithiocarbamate thiolate anion of the formula:



wherein R_2 and R_3 are the same or different and represent hydrogen, and unsubstituted or substituted alkyl, akenyl, aryl, alkoxy, and heteroaryl groups; M is an alkali metal selected from the group consisting of sodium, potassium, calcium, magnesium, barium, and lithium; An is a metal selected from the group consisting of titanium, vanadium, chromium, iron, cobalt, nickel, copper, silver, silver, and gold; n is the valence of the metal.

43. (Original) The method according to Claim 42 wherein said dithiocarbamate thiolate anion is in the form of a pharmaceutically acceptable salt.

44. (Original) The method according to Claim 42 wherein said dithiocarbamate is administered in a dosage of between about 125 to about 1000 mg per day of body weight.

45. (Original) The method according to Claim 42 wherein said dithiocarbamate is administered in a dosage of between about 250 to about 500 mg per day for disulfiram.

46. (Original) The method according to Claim 42 wherein said dithiocarbamate is administered parenterally.

47. (Original) The method according to Claim 42 wherein said dithiocarbamate is administered orally.

48. (Original) The method according to Claim 42 wherein said dithiocarbamate is administered in combination with a metal complex that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

49. (Original) The method according to Claim 42 wherein said metal complex is administered separately as a chelate with an organic anion.

50. (Original) The method according to Claim 42 wherein said an organic anion is selected from the group consisting of citrate, acetate, glyconate, glycinate, propionate and lactate.

51. (Original) The method according to Claim 42 wherein said dithiocarbamate is administered in combination with a metal chelate that includes an ion selected from the group consisting of arsenic, bismuth, cobalt, copper chromium, gallium, gold iron, manganese, nickel, silver, titanium, vanadium, selenium and zinc.

52. (New) A method for treating established cancer in a mammal comprising administering to said mammal a therapeutically active amount of a thiuram disulfide.

53. (New) The method according to Claim 52, wherein the established cancer is melanoma, lung cancer, breast cancer, or prostatic carcinoma.

54. (New) The method of Claim 52, wherein said thiuram disulfide is a tetraalkyl thiuram disulfide.

55. (New) The method of Claim 52, wherein said thiuram disulfide is tetraethyl thiuram disulfide.

56. (New) The method of Claim 52, wherein said tetraethyl thiuram disulfide is administered at a dosage of from about 125 to about 1000 mg.

57. (New) The method of Claim 52, wherein said thiuram disulfide is administered orally.

58. (New) The method of Claim 52, wherein said thiuram disulfide is administered in combination with another anticancer agent.

59. (New) A method for treating an established cancer in human selected from the group consisting of melanoma, lung cancer, breast cancer, and prostatic carcinoma, said method comprising administering to said human tetraethyl thiuram disulfide at a dosage of from about 125 to about 1000 mg.